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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,536	08/09/2001	Charles A. Shaffer	05272.00003	1981

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BANNER & WITCOFF
1001 G STREET N W
SUITE 1100
WASHINGTON, DC 20001

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EXAMINER
FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,536	SHAFFER, CHARLES A.	
	Examiner	Art Unit	
	Justin R Fischer	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 11-27* is/are pending in the application.

4a) Of the above claim(s) *10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 13-27* is/are rejected.

7)☒ Claim(s) *11 and 12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: a tubeless tire construction having a filler material disposed within the tire cavity and a tire construction having an inner tube that is filled with a filler material.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-8, 11-16, and 25-27 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the

case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Robert Katz on September 12, 2003 a provisional election was made with traverse to prosecute the invention of a tire construction having an inner tube filled with a filler material, claims 1-9 and 11-27. Affirmation of this election must be made by applicant in replying to this Office action. Claim 10 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Rejoinder will be considered upon the indication of allowable subject matter on the basis thereof.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-9 and 13-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staten (US 1,097,824) and further in view of Panaroni (US 5,254,405) and Yunan (US 3,894,973). Staten teaches a method of producing a tire having a substantially filled core or cavity comprising the steps of combining chopped/comminuted tire particles or core bits with an adhesive material, vulcanizing the thus formed assembly, and introducing said assembly into the tire core (Page 1, Lines 90-100 and Page 2,

Lines 5-10). In this instance, the adhesive material/solution forms elastic bonds for permanently connecting or "binding" the particles. Staten, however, fails to expressly describe the adhesive material as a "liquid virgin polyurethane". In any event, one of ordinary skill in the art at the time of the invention would have found it obvious to use polyurethanes as the specific adhesive material in Staten since it is extensively used as an adhesive or binder in the formation of tire components formed of chopped/comminuted tire particles, as shown for example by Panaroni (Column 1, Lines 14-51) and Yunan (Column 1, Lines 10-30, Column 2, Lines 50-59, and Column 3, Line 45). Thus, polyurethanes represent an extremely well known adhesive or binder material (described as a "popular binder" by Panaroni: Column 1, Line 40) that would have been readily appreciated in the method of Staten.

Regarding claim 2, Staten teaches that the filler (combination of comminuted tire particles and adhesive/binder) is designed to occupy the entire core (Page 1, Lines 85-90).

With respect to claims 3-5, 19, and 20, it would have been within the purview of one of ordinary skill in the art at the time of the invention to appropriately select the amount of comminuted particles and adhesive material depending on the specific tire being manufactured (e.g. passenger, heavy-duty). In particular, the broad ranges of the claimed invention define a plurality of embodiments that are consistent with similar tire constructions. For example, the method of Yunan includes a filler formed of between 50 and 99 weight percent core bits (chopped elastomeric particles) and between 5 and 50 weight percent binder (Column 2, Lines 50-60), which is almost identical to the range

required by the claimed invention. Lastly, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the ranges of the claimed invention.

Regarding claims 6-8, 16, and 24, applicant requires that the average particle size (volume) is less than 0.125 cubic inches, more preferably less than 0.0156 cubic inches, and more preferable between 0.000244 cubic inches and 0.125 cubic inches. Based on a spherical orientation, the aforementioned particles sizes suggest the following limitations regarding the diameter: less than 0.62 inches, less than 0.31inches, and between 0.078 and 0.62 inches. These values define a broad range of diameters that are consistent with the dimensions of comminuted tire particles used to form tire filler materials. For example, Panaroni suggests a range of values between 100 microns and 2 inches (Column 3, Lines 10-19), which incorporates the entire range of claimed particle sizes.

Regarding claims 9, 17, and 18, Staten states that a preferred embodiment involves arranging the filler within a tire cavity and eliminating the use of an inner tube (Page 2, Lines 30-40). However, a reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nopreferred embodiments (*Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843*). In this instance, one of ordinary skill in the art at the time of the invention would have readily appreciated and recognized the ability to use the method of Staten in a tubed tire (arrange filler within inner tube).

With respect to claims 13-15, 21-23, 25, and 27, Panaroni recognizes the well-known technique of adding a polyol and an isocyanate to form the polyurethane (Column 1, Lines 40-50).

Regarding claims 14 and 22, Panaroni recognizes the well-known use of toluene diisocyanate in the formation of polyurethanes (Column 5, Line 15).

With respect to claim 26, Staten describes the "core bits" as being formed from discarded inner tubes, casings, and solid rubber tires.

Allowable Subject Matter

6. Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art references of record fails to teach, disclose, or suggest a tire construction having a filler material formed of "core bits" and a polyurethane disposed within the tire cavity or core, wherein said tire includes a valve. In particular, Staten specifically includes a filler material within the tire cavity or core to eliminate the need to maintain an internal body of air or gas under pressure- thus, one of ordinary skill in the art at the time of the invention would not have found it obvious to include a valve, whether for inflating the tire cavity or for introducing the filler material, in the tire of Staten.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(703) 605-4397**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Justin Fischer

September 16, 2003

Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700